

**CLAIM(S)**

What is claimed is:

1. A process for repairing coated substrate surfaces comprising the following
  - 5 successive steps:
    - a) optionally, preparing a blemished area to be repaired,
    - b) providing at least one backing film coated on one side with an uncured or at least only partially cured coating layer of a thermally curable coating composition,
    - 10 c) applying the at least one backing film with its coated side onto the blemished area to be repaired,
    - d) supplying thermal energy to the coating applied in this manner onto the blemished area to be repaired and
    - 15 e) removing the at least one backing film, wherein the supply of thermal energy onto the coating proceeds through the at least one backing film, and/or after removal of the at least one backing film.
  2. Process according to claim 1, wherein the supply of thermal
   - 20 energy to the coating proceeds through the at least one backing film.
3. The process according to claim 1, wherein the uncured or at least only partially cured coating layer in step b) comprises a coating layer with a tacky surface.
- 25 4. The process according to claim 1, wherein the thermally curable coating composition comprises a coating composition with free-radically polymerizable binders.
- 30 5. The process according to claim 1, wherein the thermally curable coating composition comprises a coating composition with binders cross-linkable by means of polycondensation and/or polyaddition reactions.

6. The process according to claim 1, wherein a backing film with a protective film on one or both sides is provided in step b).

7. The process according to claim 1, wherein application of the at least one backing film in step c) proceeds under pressure.

8. The process according to claim 1, wherein supply of thermal energy applied to the blemished area to be repaired is performed with infrared radiation emitters.

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9. The process according to claim 1, wherein the supply of thermal energy to the blemished area to be repaired is performed with near infrared radiation emitters which emit near infrared radiation of a wavelength range of 760 to 1200 nm and an intensity (radiation output per unit area) of 100 kW/m<sup>2</sup> to 15 MW/m<sup>2</sup>.

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10. The process according to claim 1, wherein supply of thermal energy applied to the blemished area to be repaired is performed by means of contact heating.

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11. The process according to claim 1, wherein the coated substrate surfaces to be repaired have small blemished areas.

12. The process according to claim 1, wherein the coated substrate surfaces to be repaired are automotive or industrial coatings.

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